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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
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10/768,415

01/30/2004

Philip Emery

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EXAMINER

SHEWAREGED, BETELHEM

ART UNIT

PAPER NUMBER

1794

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DELIVERY MODE

03/17/2009

PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary	Application No. 10/768,415	Applicant(s) EMERY ET AL.	
	Examiner Betelhem Shewareged	Art Unit 1794	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 20 February 2009.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 25,27,28,30,31 and 33-46 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 25,27,28,30,31 and 33-46 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
 - ☐ Certified copies of the priority documents have been received in Application No. _____.
 - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413) |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | Paper No(s)/Mail Date. _____ |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08) | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

1. Applicant's response along with the Request for Continued Examination (RCE) filed on 2/20/2009 has been fully considered. Claim 25 is amended, claims 1-24, 26, 29 and 32 are canceled, and claims 25, 27, 28, 30, 31 and 33-46 are pending.

Claim Rejections - 35 USC § 103

2. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

3. Claims 25, 27, 28, 30, 31, 33-39 and 44-46 are rejected under 35 U.S.C. 103(a) as being unpatentable over Lin et al. (US 5,190,609) in view of Shih (US 5,824,398), Ast (US 6,248,427 B1) and Huguen et al. (US 5,747,192).

4. Lin teaches a heat shrinkable label comprising a backing sheet (col. 2, line 42), a first pressure sensitive adhesive (PSA) on the backing layer (col. 2, line 56), a first shrinkable layer on the first PSA (col. 2, line 44), graphics on the first shrinkable layer (col. 3, line 23), a second pressure sensitive adhesive (PSA) on the graphics (col. 3, line 32), and a second shrinkable layer on the second PSA (col. 2, line 44). The first and second shrinkable layers are made of polypropylene (col. 2, line 45). The thickness of the shrinkable layer is 1.25 mils (col. 4, line 63).

5. With respect to the claimed stiffness value, the experimental modification of this prior art in order to ascertain optimum operating conditions fails to render applicants' claims patentable in the absence of unexpected results. *In re Aller*, 105 USPQ 233. One of ordinary skill in the art would have been motivated to adjust the stiffness value in order to optimize the integrity of the film. A prima facie case of obviousness may be rebutted, however, where the results of the optimizing variable, which is known to be result-effective, are unexpectedly good. *In re Boesch and Slaney*, 205 USPQ 215.
6. Lin does not teach the claimed onset shrinkage temperature value. However, Shih teaches a shrink film having an onset shrink temperature of 64 degree C or less (Examples and Table II). In col. 1, lines 45-56, Shih expressly teaches that previously disclosed polyester films have at least two major disadvantages, a higher on-set shrink temperature than 50-60 degree C and a higher shrink rate than four percent per degree C. A high on-set shrink temperature means that the film or sheet requires a higher temperature at which the film starts to contract in a heated shrink tunnel or oven. High on-set temperature can cause container or content damage. The other disadvantage is a higher shrink rate which refers to the percent shrinkage per degree of temperature increase. A high shrink rate causes wrinkle or bubble formation in shrink film or sheet as it travels through the shrink tunnel. Therefore, at the time of the invention, it would have been obvious to a person of ordinary skill in the art to select a polymeric film having a higher on-set temperature than 50-60 degree C with the knowledge of consequence loss of the film's benefits. If an ordinary artisan desires a film having higher on-set shrink temperature and higher shrinkage rate with less need for film

quality, a film with higher on-set shrink temperature and a higher shrink rate would be selected with predictable results. Lin and Shih are analogous art because they are from the same field of endeavor that is the shrink film art. At the time of the invention it would have been obvious to a person of ordinary skill in the art to combine the teaching of Shih with the invention of Lin, and the motivation would be, as Shih suggests, providing a shrink film having heat resistance, stress crack resistance and excellent melt flowability (col. 7, lines 24-26).

7. Lin does not teach the use of polystyrene as the shrinkable layers. However, Ast teaches adhesive label comprising a shrinkable cover foil that can be made of polypropylene, polystyrene, polyethylene or polyester (col. 3, lines 37-42).

8. Lin and Ast are analogous art because they are from the same field of endeavor that is the heat shrinkable label art. At the time of the invention, it would have been obvious to a person of ordinary skill in the art to use polystyrene to make the shrinkable layers of Lin since the examiner takes Official Notice of the equivalence of polyethylene and polystyrene for their use in the heat shrinkable art and the selection of any of their known equivalents to make the shrinkable layers would be within the level of ordinary skill in the art.

9. With respect to the shrink and growth direction of the label, it is well known in the shrinkable label art for the label to be applied on a battery to shrink up to 60% in the direction normal to the axis of the battery, and to shrink -2 to +5% in the axial direction, wherein negative shrinkage means elongation. Such characteristics are well known in the art before the claimed invention (see col. 5, lines 19-36 of Huguen).

10. Claims 25, 27, 28, 30, 31, 33-43, 45 and 46 are rejected under 35 U.S.C. 103(a) as being unpatentable over Ast (US 6,248,427 B1) in view of Shih (US 5,824,398) and Hughen et al. (US 5,747,192).

11. Ast teaches an adhesive shrinkable label comprising a carrier (col. 4, line 17), an adhesive on the carrier (col. 4, line 15), a carrier material on the adhesive (col. 4, lines 7-13), wherein the carrier material comprises metallic layer and non-metallic layer, a laminating adhesive on the carrier material (col. 5, line 52), imprints on the laminating adhesive, and a shrinkable cover foil on the imprint (col. 3, line 39). Ast does not teach the claimed onset shrinkage temperature value. However, Shih teaches a shrink film having an onset shrink temperature of 64 degree C or less (Examples and Table II). In col. 1, lines 45-56, Shih expressly teaches that previously disclosed polyester films have at least two major disadvantages, a higher on-set shrink temperature than 50-60 degree C and a higher shrink rate than four percent per degree C. A high on-set shrink temperature means that the film or sheet requires a higher temperature at which the film starts to contract in a heated shrink tunnel or oven. High on-set temperature can cause container or content damage. The other disadvantage is a higher shrink rate which refers to the percent shrinkage per degree of temperature increase. A high shrink rate causes wrinkle or bubble formation in shrink film or sheet as it travels through the shrink tunnel. Therefore, at the time of the invention, it would have been obvious to a person of ordinary skill in the art to select a polymeric film having a higher on-set temperature than 50-60 degree C with the knowledge of consequence loss of the film's benefits. If an ordinary artisan desires a film having higher on-set shrink temperature and higher

shrinkage rate with less need for film quality, a film with higher on-set shrink temperature and a higher shrink rate would be selected with predictable results. Ast and Shih are analogous art because they are from the same field of endeavor that is the shrink film art. At the time of the invention it would have been obvious to a person of ordinary skill in the art to combine the teaching of Shih with the invention of Ast, and the motivation would be, as Shih suggests, providing a shrink film having heat resistance, stress crack resistance and excellent melt flowability (col. 7, lines 24-26).

12. With respect to the claimed stiffness value, the experimental modification of this prior art in order to ascertain optimum operating conditions fails to render applicants' claims patentable in the absence of unexpected results. *In re Aller*, 105 USPQ 233. One of ordinary skill in the art would have been motivated to adjust the stiffness value in order to optimize the integrity of the film. A prima facie case of obviousness may be rebutted, however, where the results of the optimizing variable, which is known to be result-effective, are unexpectedly good. *In re Boesch and Slaney*, 205 USPQ 215.

13. Ast teaches the shrinkable cover foil has a thickness of 20-70 micrometer (0.02-0.07mm) (col. 3, line 43 of Ast). Ast teaches that the shrinkable foil can carry additional layers on top and bottom side (col. 3, line 63). At the time of the invention, it would have been obvious to a person of ordinary skill in the art to add a transparent protective layer on the external side of the shrinkable cover foil so as to protect the foil during manufacturing, packaging, and/or transportation because adding a protective layer is on a laminate and/or a label is well known in the laminate and/or label art.

14. With respect to the shrink and growth direction of the label, it is well known in the shrinkable label art for the label to be applied on a battery to shrink up to 60% in the direction normal to the axis of the battery, and to shrink -2 to +5% in the axial direction, wherein negative shrinkage means elongation. Such characteristics are well known in the art before the claimed invention (see col. 5, lines 19-36 of Hughen).

Response to Arguments

15. Applicant's argument is based on that Shih's objective is to provide heat shrinkable films with substantially lower onset shrinkage temperatures at or below 60°C (Shih, col. 1, line 47 and col.6, lines 14 - 16). Thus, if Shih's teachings were to be combined with those of Lin or Ast, as the examiner suggests, the resulting labels would undergo shrinkage at temperatures well below applicants' claimed threshold of about 75°C. None of the cited references discloses or suggests applicants' high onset shrinkage temperature. This argument is not persuasive for the following reason. Even though Shih teaches a shrink film having an onset shrink temperature of 64 degree C or less (Examples and Table II), in col. 1, lines 45-56, Shih also expressly teaches that previously disclosed polyester films have at least two major disadvantages, a higher on-set shrink temperature than 50-60 degree C and a higher shrink rate than four percent per degree C. A high on-set shrink temperature means that the film or sheet requires a higher temperature at which the film starts to contract in a heated shrink tunnel or oven. High on-set temperature can cause container or content damage. The other disadvantage is a higher shrink rate which refers to the percent shrinkage per degree of

temperature increase. A high shrink rate causes wrinkle or bubble formation in shrink film or sheet as it travels through the shrink tunnel. Therefore, at the time of the invention, it would have been obvious to a person of ordinary skill in the art to select a polymeric film having a higher on-set temperature than 50-60 degree C with the knowledge of consequence loss of the film's benefits. If an ordinary artisan desires a film having higher on-set shrink temperature and higher shrinkage rate with less need for film quality, a film with higher on-set shrink temperature and a higher shrink rate would be selected with predictable results. Furthermore, the specification does not show the criticality of the claimed on-set temperature.

Conclusion

16. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Betelhem Shewareged whose telephone number is (571)272-1529. The examiner can normally be reached on Monday-Friday 9am-5pm.

17. If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Keith Hendricks can be reached on 571-272-1401. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

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18. Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

BS
March 13, 2009.

/Betelhem Shewareged/
Primary Examiner, Art Unit 1794